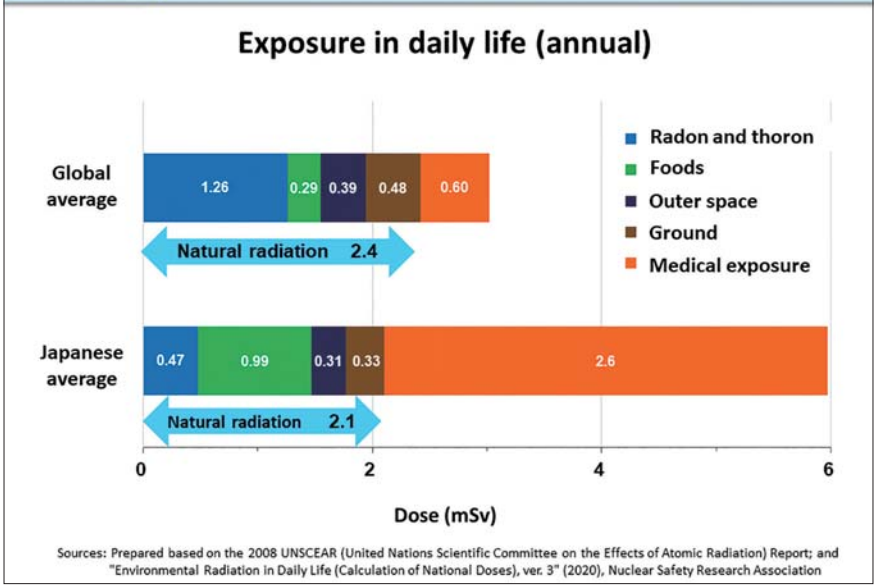
Comparison of Exposure Doses per Year



Sources: Prepared based on the 2008 UNSCEAR (United Nations Scientific Committee on the Effects of Atomic Radiation) Report; and "Environmental Radiation in Daily Life (Calculation of National Doses), ver. 3" (2020), Nuclear Safety Research Association

In November 2020, the Nuclear Safety Research Association of Japan published "Environmental Radiation in Daily Life (Calculation of the National Doses) ver. 3" and announced Japan's national doses therein. The survey shows that the annual average dose of Japanese people is 4.7mSv, of which 2.1 mSv are estimated to be caused by exposure to natural radiation.

Comparison with the global average shows that Japanese people's exposures to Radon-222 and Radon-220 (thoron) are relatively low while exposures from foods are relatively high. The Japanese people's exposure due to Lead-210 and Polonium-210 in foods amounts to 0.80 mSv, which is high compared to the global average, probably due to Japanese people's high consumption of fish and seafood (p.66 of Vol. 1, "Breakdown of Natural Exposure Doses (Japanese)"). Incidentally, analyses of Lead-210 and Polonium-210 in foods have rarely been conducted so often in foreign countries as in Japan and this is considered to be one of the factors of higher exposures to Lead-210 and Polonium-210 among Japanese compared with the global average.

The annual average medical exposure in Japan is estimated to be 2.6 mSv. As a result of the estimation based on the latest information, it was found that the annual average decreased significantly from 3.87 mSv stated in "Environmental Radiation in Daily Life (Calculation of the National Doses) ver. 2," which was published in 2011. While exposure doses from radiological examinations vary widely among individuals, Japanese people's exposure doses are known to be significantly high on average. In particular, the widespread use of CT scans is a major contributing factor. As criteria for determining the appropriateness of medical exposure, it is recommended to use the diagnostic reference levels. The diagnostic reference levels have also been published in Japan (p.76 of Vol. 1, "Radiation Doses from Medical Diagnosis").

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